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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,411	07/06/2001	Kazim Ozbaysal	13DV14050	5957

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EXAMINER
WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 01/28/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/900,411

Applicant(s)

OZBAYSAL, KAZIM

Examiner

George P Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7-16 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 6, 17, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASM Handbook Volume 2 in view of ASM Handbook Volume 4, as set forth in the previous Office Action (Paper no. 12), taken with the following.

Volume 2 of the ASM Handbook teaches that it is known in the art to process titanium-base alloys (e.g. an IMI-550 alloy as recited in instant claim 6) by a series of thermo-mechanical process steps, including heating to a temperature above 1600°F, cooling to less than 800°F, a second heating to a temperature consistent with that as recited in the instant claims, and final cooling. Volume 2, particularly Volume 2, section 2, page 4, indicates it to be conventional in the art to perform a forging step as recited in instant claim 23. Volume 2, section 4, page 1 indicates that a weld repair step as recited in instant claims 6 and 17 is conventional in the art.

With respect to stress relief, Volume 2, section 2, page 20 indicates that stress relief is desirable in these alloys for purposes such as decreasing undesirable stresses resulting from previous actions such as forging, welding, and cooling steps. Removal of such stresses helps maintain shape stability and eliminate loss of compressive yield strength (commonly known as the Bauschinger effect). With respect to the specific times and temperatures claimed, one of ordinary skill in the art would have found the teachings in Volume 2 sufficiently enabling to perform the stress relief in a manner sufficient for the taught use of providing a product that has shape stability and eliminates loss of compressive yield strength, including a temperature range of 1000-1050°F.

Volume 2 does not specify the final cooling rate as defined in the instant claims. However, Volume 2, section 2, page 20 indicates that air or furnace cooling is desirable in order to assure uniformity of cooling throughout the material being cooled. Volume 4, particularly Volume 4, section 1, page 5, indicates that such air or furnace cooling would result in a cooling rate as defined in the instant claims.

Therefore, the combined teachings of Volume 2 of the ASM Handbook, together with the known effects of various cooling mechanisms on cooling rates as discussed in Volume 4 of the ASM Handbook, would have taught the process as presently claimed to one of ordinary skill in the art.

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over ASM Handbook Volume 2 in view of ASM Handbook Volume 4, as set forth supra, and further in view of Ruckle et al. (U.S. Patent 4,631,092).

The ASM Handbooks, while in general disclosing a process as defined in the instant claim as discussed supra, do not explicitly teach performing such a process upon a part having one portion with a thickness less than 0.2 inch and another portion with a thickness greater than 0.2 inch. Ruckle column 4, lines 30-32 indicates that it is conventional in the art to thermo-mechanically form titanium-base materials having dimensions as presently claimed. In the absence of any particular advantage or unexpected result obtainable using products of the claimed dimensions, the examiner's position is that the processes as described in the ASM Handbooks would be applicable in general to objects made of titanium-base alloys, such as objects having the dimensions as taught by Ruckle et al.

4. In a response filed October 31, 2003, Applicant alleges that the weld repairing disclosed in the ASM Handbook would be applicable only to castings as opposed to wrought materials, and/or that various process steps disclosed by Ruckle are distinct from those set forth in the instant claims. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) It is unclear what if any relationship would exist between a weld repair step and any previous steps (e.g. casting, heating, cooling) which may have been performed upon a titanium-base object in the past. Weld repair of surface defects (as taught in Volume 2, section 4 of the ASM Handbook) would be an appropriate means to repair such defects regardless of prior processing. Further, it is noted that the "providing" step of the instant claims would include embodiments in which this step includes casting of the desired material.

b) Nothing in the Ruckle patent or in the ASM Handbook would indicate that the processes as disclosed in the ASM Handbook would be inoperable or otherwise contraindicated upon objects having a shape as set forth by Ruckle.

5. Claims 1-5, 7-16, and 18-21 are allowable over the prior art of record. The prior art does not disclose or suggest a process including all of the features as recited in independent claims 1 or 12, as set forth by Applicant on page 9 of the October 31, 2003 response.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective October 1, 2003, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

GPW

January 21, 2004



GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER